

METHOD FOR MAKING MULTI-LAYER CERAMIC ACOUSTIC TRANSDUCER

ABSTRACT OF THE DISCLOSURE

A method for manufacturing a multi-layer acoustic transducer with reduced total electrical impedance. The method is based on the bonding of two piezoelectric ceramic layers with confronting metallized surfaces to a thin electrical conductor, then electrically connecting the top and bottom surfaces to form a wrap-around electrode while a center conductor forms a second electrode. The total electrical impedance of a two-layer ceramic stack comprised of piezoelectric layers connected in this manner is one-fourth that of a solid ceramic element of the same size. This provides for better matching of the acoustic stack impedance to that of the electrical cable, increased penetration depth for imaging within the body, and improved acoustic element sensitivity.